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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dror Salee

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12/29/2005

TEXAS INSTRUMENTS INCORPORATED

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EXAMINER

CHANG, SHIRLEY

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/894,748		SALEE, DROR	
	Examiner		Art Unit	
	Shirley Chang		2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/26/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 8/22/05 have been fully considered but they are not persuasive with respect to arguments pertaining to the amended limitations and the applied art of record not teaching the amended limitations. The examiner respectfully disagrees and refers to the grounds of rejection.

As to claim 3, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., 'periodically resetting the spare CMTS') are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method for establishing timer synchronization must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4, 6-7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by White et al. (20020038461).

As to claim 1, White discloses:

A headend of a cable network data communication system, comprising:

a first cable modem termination system (CMTS) circuitry component having a receiver or transmitter ('CMTSs is each configured to receive and transmit modem-compatible signals' [0038]).

the first component including a first system timer adapted to be incremented by clock pulses, a first comparator connected to said first timer for determining when the first timer has reached a designated count, and generating a first reset signal when the first timer has reached the designated count (since 'synchronization messages are periodically sent to the diagnostic CM,' messages may be sent every x seconds. Once the time reaches x, the process resets, and the next messages wait until x seconds to send; a hardware-based synchronization scheme used to help ensure that all CMTSs 12, 28 in the system 10 work from a common time reference" [0061]; "a process 100 of restoring (or otherwise providing redundant) service in response to detecting a CMTS non-activity indication or inducer, e.g., a transmit failure, includes a stage 102, where synchronization messages (synch messages) are sent from an active CMTS, e.g., CMTS 12.sub.2 to an associated diagnostic CM 90.sub.2. At stage 102, synchronization messages are periodically sent to the diagnostic CM 90.sub.2. The CM 90.sub.2 responds to the received synch messages by starting a synch timer" [0068-0070]).

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and a first reset circuit connected to the first timer for resetting the first timer in response to the first or second a reset signal ('the CMTS resetting on receipt of alarm and trigger the spare CMTS to take over' [0065]; "At stage 108, the failed, or otherwise imminently or currently non-active, CMTS 12.sub.2 resets and the spare CMTS 16 loads parameters from the failed CMTS 12.sub.2. The spare CMTS 16 updates its parameters to match those taken from the failed CMTS 12.sub.2. The spare CMTS 16 further begins producing synch messages and sets an RF switch to map the spare CMTS output to the appropriate HFC segment associated with the failed CMTS 12.sub.2" [0071]).

a second component being adapted to serve as a swap-out replacement for the first component ("the spare CMTS 16 is configured to take over for a failed normally-active CMTS 12" [0038]).

a second CMTS circuitry component having a receiver or transmitter ('CMTSs is each configured to receive and transmit modem-compatible signals' [0038]),

the second component being adapted to serve as a swap-out replacement for the first component ("a hardware-based synchronization scheme used to help ensure that all CMTSs 12, 28 in the system 10 work from a common time reference" [0061], and also met by "the spare CMTS 16 includes hardware and software, in control unit 17, for monitoring the other CMTSs 12" [0042]; "a process 100 of restoring (or otherwise providing redundant) service in response to detecting a CMTS non-activity indication or inducer, e.g., a transmit failure, includes a stage 102, where synchronization messages

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(synch messages) are sent from an active CMTS, e.g., CMTS 12.sub.2 to an associated diagnostic CM 90.sub.2. At stage 102, synchronization messages are periodically sent to the diagnostic CM 90.sub.2. The CM 90.sub.2 responds to the received synch messages by starting a synch timer" [0068-0070]],

and the second component including a second system timer adapted to be incremented by clock pulses, a second comparator connected to the second timer for determining when the second timer has reached a designated count and generating the second reset signal, and a second reset circuit connected to the second timer for resetting the second timer in response to the first or the second reset signal; and circuitry connected to the first and second components for selectively connecting the first comparator to provide the first reset signal to the second reset circuit and the second comparator to provide the second reset signal to the first reset circuit ('the CMTS resetting on receipt of alarm and trigger the spare CMTS to take over" [0065]; "At stage 108, the failed, or otherwise imminently or currently non-active, CMTS 12.sub.2 resets and the spare CMTS 16 loads parameters from the failed CMTS 12.sub.2. The spare CMTS 16 updates its parameters to match those taken from the failed CMTS 12.sub.2. The spare CMTS 16 further begins producing synch messages and sets an RF switch to map the spare CMTS output to the appropriate HFC segment associated with the failed CMTS 12.sub.2" [0071]);

As to claim 3,

A method for establishing timer synchronization between redundant active and standby circuit components of a headend of a cable network data communication system, comprising:

providing a first cable modem termination system (CMTS) circuitry component including a system timer incremented by clock pulses (a hardware-based synchronization scheme used to help ensure that all CMTSs 12, 28 in the system 10 work from a common time reference" [0061]; "a process 100 of restoring (or otherwise providing redundant) service in response to detecting a CMTS non-activity indication or inducer, e.g., a transmit failure, includes a stage 102, where synchronization messages (synch messages) are sent from an active CMTS, e.g., CMTS 12.sub.2 to an associated diagnostic CM 90.sub.2. At stage 102, synchronization messages are periodically sent to the diagnostic CM 90.sub.2. The CM 90.sub.2 responds to the received synch messages by starting a synch timer" [0068-0070]);

providing a second CMTS circuitry component including a system timer incremented by clock pulses; the second component being adapted to serve as a swap-out replacement for the first component; resetting the second component timer when the first timer has reached a designated count (since 'synchronization messages are periodically sent to the diagnostic CM,' messages may be sent every x seconds. Once the time reaches x, the process resets, and the next messages wait until x seconds to send; a hardware-based synchronization scheme used to help ensure that all CMTSs 12, 28 in the system 10 work from a common time reference" [0061]; "a process 100 of restoring (or otherwise providing redundant) service in response to detecting a CMTS non-activity

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indication or inducer, e.g., a transmit failure, includes a stage 102, where synchronization messages (synch messages) are sent from an active CMTS, e.g., CMTS 12.sub.2 to an associated diagnostic CM 90.sub.2. At stage 102, synchronization messages are periodically sent to the diagnostic CM 90.sub.2. The CM 90.sub.2 responds to the received synch messages by starting a synch timer" [0068-0070]).

As to claims 4 and 7,

White discloses method in a system, wherein the method comprises:

selecting a cable modem termination system (CMTS) from a plurality of CMTSs in a headend of a cable network comprising: providing periodic reset signals from a first CMTS to a second CTMS of the plurality of CTMSs, wherein the first CMTS is an active CMTS in the headend providing service for a plurality of cable modems in the cable network and the second CTMS is a standby CTMS for the plurality of cable modems; monitoring the first CMTS for a predetermined event;

upon detecting the predetermined event, switching the first CTMS with the second CTMS for providing service to the plurality of cable modems in the cable network ([0061]; [0068-0070]; [0065]; [0071]; [0038]),

As to claims 6 and 9,

the step of providing periodic reset signals comprising: monitoring a count of a first timer in the first CTMS; comparing the count with a predetermined number N; and

providing a reset signal to a second timer included in the second CTMS (since 'synchronization messages are periodically sent to the diagnostic CM,' messages may be sent every x seconds. Once the time reaches x, the process resets, and the next messages wait until x seconds to send [0068-0070]; [0061]; [0065]; [0071]; [0038]).

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim(s) 5 and 8 is/are rejected under 35 U.S.C. § 103(a) as being unpatentable over White (20020038461).

As to claim 5 and 8,

Although the White does not specifically disclose monitoring the first CMTS comprises monitoring an output of the first CTMS and the predetermined event is at least one or more of: a drop in mean squared error of a signal output of the first CMTS; one or more erroneous forward error correction frames in the output of the first CTMS; and one or more erroneous media access control frames in the output of the first CTMS, the examiner gives Official Notice that it is notoriously well known in the art to monitor

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mean squared error. Accordingly, it would have been obvious to one of ordinary skill in the art to modify White in order to have a means to further determine if the unit has failed. For example, simply because the CMTS doesn't respond to the synchronization counter does not specifically disclose necessarily mean that the device is operating properly. These concepts are well known in the art and do not constitute a patentably distinct limitation, per se [M.P.E.P. 2144.03].

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shirley Chang whose telephone number is (571) 272-8546. The examiner can normally be reached on 8:30-5:00 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SC



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